

ABSTRACT

A drug delivery conformal film system according to the present invention is adapted to be compounded and applied, by medical personnel at the point of use, to a medical device such as a cardiovascular and urology stent, pacemaker, vascular graft, suture ring of mechanical heart valve, implantable infusion port, implantable drug delivery pump, orthopedic hardware and appliance, and, neurological stimulating device. The drug delivery conformal film consists of one of three in vivo biocompatible; biodegradable, bio-erodable or bioabsorbable embodiments: (1) cross-linked sodium alginate, (2) UV photo-active polymer, or, (3) hydrogels. An implantable medical device such as the stent or suture ring of a mechanical artificial heart valve is coated with an in vivo biocompatible; biodegradable or bioerodable or bioabsorbable solution comprising a polymer and containing a drug, the solution is cross-linked or cured to form a film on the device immediately prior to placement in the body. When the coated device is introduced into the body, the drug contained in the coating is released in a local region. The invention provides a point of use in vivo drug delivery system whereby the drug and its concentration can be selected by medical personnel immediately prior to implantation of the medical device.